

**Notice of Allowability**

Application No.

10/622,544

Examiner

Blaise L. Mouttet

Applicant(s)

HIRAYAMA, NOBUYUKI

Art Unit

2853

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the communication of December 15, 2003.
2. ☒ The allowed claim(s) is/are 1-13.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 11/7/03, 12/15/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Peter Thurlow (Reg. No. 47,138) on November 23, 2004.

In the claims:

In claim 6, line 4, change "transistors" to --transistor--.

In claim 7, last two lines, change "generating heat energy to be applied to ink" to --generating the heat energy to be applied to the ink--.

In claim 13, last two lines, change "generating heat energy to be applied to ink" to --generating the heat energy to be applied to the ink--.

The following changes to the drawings have been approved by the examiner and agreed upon by applicant:

Fig. 3: Delete reference character 109.

Fig. 6: Delete reference characters 207a1-207mx.

Figs 12-15: Label each figure --PRIOR ART--.

Fig. 14: Delete reference character 1102 and bracket that refers to the whole figure.

Figure 15: Delete reference character 1107.

In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

### ***Additional Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kanda et al. US 6,780,701 teaches forming high and low breakdown voltage transistors on a common substrate and notes that logic sections are commonly formed with lower breakdown voltages than drive sections for devices such as printheads (column 1, lines 15-26).

Scardovi et al. WO 01/03932 teaches a plurality of individual MOS switches (22) for printing elements (21) (characterized as the drive portions), a common MOS switch (25) (characterized as a logic portion) arranged commonly to printing elements belonging to each of a plurality of groups of the printing elements, and driving means (providing the logic X and control A signals). Scardovi et al. fails to specify any difference between the MOS switches forming the common switches and those forming the individual switches.

### **REASONS FOR ALLOWANCE**

The following is a statement of reasons for the indication of allowable subject matter:

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Forming MOS transistors for printheads with different breakdown voltages is evidenced in the prior art by Kanda et al. and a similar circuit configuration to that claimed is evidenced in the prior art by Scardovi et al. However a combination of the teachings of the two references would result in the opposite scenario to that claimed (i.e. the common MOS switch, characterized as performing a logic function by Scardovi et al., having the lower breakdown voltage.) which is seen as persuasive evidence of the non-obviousness of the claimed invention. None of the prior art of record discloses or renders obvious the combinations as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Blaise Mouttet who may be reached at telephone number (571) 272-2150. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier, Art Unit 2853, can be reached at (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Blaise Mouttet December 3, 2004

Bl. mtt 12/03/2004



LAMSON NGUYEN  
PRIMARY EXAMINER  
12/07/04